What is claimed is:

1. An image-sensing apparatus comprising:

a photoelectric conversion portion having a photosensitive element that produces an electric signal in accordance with amount of incident light and a transistor having a first electrode and a control electrode connected to the photosensitive element and a second electrode, the photoelectric conversion portion outputting the electric signal output from the photosensitive element and converted natural-logarithmically by making the transistor operate in a subthreshold region;

a lead-out path by way of which the electric signal output from the photoelectric conversion portion is fed to an output signal line;

a constant-current source; and

a controller that resets the transistor by feeding a current from the constant-current source to the transistor in such a way as to make a voltage at the control electrode of the transistor equal to a predetermined voltage corresponding to the transistor.

2. An image-sensing apparatus as claimed in claim 1, further comprising:

a first switch provided between the first electrode of the transistor and the constant-current source,

wherein the controller performs image sensing by turning off the first switch and making the transistor operate in a subthreshold region, and

wherein the controller resets the transistor by turning on the first switch and

feeding a current from the constant-current source to the transistor in such a way as to bring the transistor into a conducting state.

3. An image-sensing apparatus as claimed in claim 2, further comprising:

a second switch provided between the photosensitive element and the first electrode of the transistor,

wherein the controller turns on the second switch when performing image sensing and turns off the second switch when resetting the transistor.

4. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including a photoelectric conversion portion that outputs an electric signal produced in accordance with amount of incident light and converted natural-logarithmically and a lead-out path by way of which the electric signal output from the photoelectric conversion portion is fed to an output signal line, the photoelectric conversion portion comprising:

a photosensitive element having a first electrode to which a direct-current voltage is applied and a second electrode;

a first transistor having a first electrode and a control electrode connected to the second electrode of the photosensitive element and a second electrode;

a second transistor having a first electrode to which a direct-current voltage is applied, a second electrode from which an electric signal is output, and a control electrode connected to the first electrode and control electrode of the first

transistor;

a constant-current source for feeding a constant current to the first transistor; and

a first switch connected between the constant-current source and a node between the first electrode and control electrode of the first transistor; and

a controller that makes the individual pixels perform image sensing by turning off the first switch and that resets the individual pixels by turning on the first switch.

5. An image-sensing apparatus as claimed in claim 4,

wherein the pixels each further include a second switch connected between the node between the control electrode and first electrode of the first transistor and the second electrode of the photosensitive element, and

wherein the controller turns on the second switch when making the individual pixels perform image sensing and turns off the second switch when resetting the individual pixels.

6. An image-sensing apparatus as claimed in claim 5,

wherein the second switch is a transistor.

7. An image-sensing apparatus as claimed in claim 4,

wherein the pixels each further include a second switch having one contact connected to the first electrode of the photosensitive element and receiving at another contact a direct-current voltage, and

wherein the controller turns on the second switch when making the individual pixels perform image sensing and turns off the second switch when resetting the individual pixels.

8. An image-sensing apparatus as claimed in claim 7, wherein the second switch is a transistor.

9. An image-sensing apparatus as claimed in claim 4, wherein the first switch is a transistor.

10. An image-sensing apparatus as claimed in claim 4, wherein the pixels are arranged in a matrix.

11. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including:

a photodiode having two electrodes, the photodiode producing an electric signal in accordance with amount of incident light;

a first MOS transistor having a first electrode and a gate electrode connected to one electrode of the photodiode and a second electrode;

a second MOS transistor having a first electrode, a second electrode, and a gate electrode connected to the first electrode and gate electrode of the first MOS transistor;

a constant-current source; and

a third MOS transistor having a first electrode connected to the

constant-current source, a second electrode connected to the first electrode and gate electrode of the first MOS transistor, and a gate electrode; and

a controller that makes the individual pixels perform image sensing by turning off the third MOS transistor and making the first MOS transistor operate in a subthreshold region below a threshold voltage thereof so that the electric signal output from the photodiode is converted natural-logarithmically,

wherein the controller resets the individual pixels by turning on the third MOS transistor and feeding a constant current to the first MOS transistor so that a voltage at the gate electrode of the first MOS transistor is reset to a predetermined voltage corresponding to the first MOS transistor.

12. An image-sensing apparatus as claimed in claim 11,

wherein the pixels each further include a fourth MOS transistor provided between the photodiode and the first MOS transistor and having a first electrode connected to the second electrode of the photodiode, a second electrode connected to a node between the first electrode and gate electrode of the first MOS transistor, and a gate electrode, and

wherein the controller turns on the fourth MOS transistor when making the individual pixels perform image sensing and turns off the fourth MOS transistor when resetting the individual pixels.

13. An image-sensing apparatus as claimed in claim 11,

wherein the pixels each further include a fourth MOS transistor having a first electrode to which a direct-current voltage is applied, a second electrode

connected to the first electrode of the photodiode, and a gate electrode, and

wherein the controller turns on the fourth MOS transistor when making the individual pixels perform image sensing and turns off the fourth MOS transistor when resetting the individual pixels.

14. An image-sensing apparatus as claimed in claim 11,

wherein the pixels each further include a sixth MOS transistor having a first electrode connected to the second electrode of the second MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

15. An image-sensing apparatus as claimed in claim 11,

wherein the pixels each further include a fifth MOS transistor having a first electrode connected to a direct-current voltage, a second electrode, and a gate electrode connected to the second electrode of the second MOS transistor, the fifth MOS transistor amplifying a signal output from the second electrode of the second MOS transistor.

16. An image-sensing apparatus as claimed in claim 15,

wherein the pixels each further include a sixth MOS transistor having a first electrode connected to the second electrode of the fifth MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

17. An image-sensing apparatus as claimed in claim 15,

wherein the pixels each further include a capacitor having one end connected to the second electrode of the second MOS transistor, the capacitor being reset through the second MOS transistor when a reset voltage is fed to the first electrode of the second MOS transistor.

18. An image-sensing apparatus as claimed in claim 15,

wherein the first electrode of the second MOS transistor is connected to a direct-current voltage, and

wherein the pixels each further include:

a seventh MOS transistor having a first electrode connected to the second electrode of the second MOS transistor, a second electrode connected to a direct-current voltage, and a gate electrode; and

a capacitor having one end connected to the second electrode of the second MOS transistor, the capacitor being reset through the seventh MOS transistor when a reset voltage is fed to the gate electrode of the seventh MOS transistor.

19. An image-sensing apparatus as claimed in claim 11, further comprising:

a first direct-current voltage line connected commonly to the second electrode of the first MOS transistor of each of pixels arranged in a line in a first direction; and

a second direct-current voltage line connected commonly to the second

electrode of the first MOS transistor of each of pixels arranged in a line in a second direction,

wherein the controller makes the individual pixels perform image sensing by connecting the second electrode of the first MOS transistor of the individual pixels to the first direct-current voltage line and resets the individual pixels by connecting the second electrode of the first MOS transistor of the individual pixels to the second direct-current voltage line.

20. An image-sensing apparatus as claimed in claim 11, further comprising:

MOS transistors serving as load resistors or a constant-current sources connected to the individual pixels by way of output signal lines.

21. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including a photoelectric conversion portion that outputs an electric signal produced in accordance with amount of incident light and converted natural-logarithmically and a lead-out path by way of which the electric signal output from the photoelectric conversion portion is fed to an output signal line, the photoelectric conversion portion comprising:

a photosensitive element having a first electrode to which a direct-current voltage is applied and a second electrode;

a first switch having one contact connected to the second electrode of the photosensitive element;

a first transistor having a first electrode connected to another contact

of the first switch, a second electrode, and a control electrode;

a second transistor having a first electrode to which a direct-current voltage is applied, a second electrode from which an electric signal is output, and a control electrode connected to the first electrode of the first transistor; and

a second switch connected between the first electrode and control electrode of the first transistor; and

a controller that makes the individual pixels perform image sensing by turning on the first and second switches and that detects variations in sensitivity of the individual pixels by turning off the first and second switches and varying a voltage fed to the control electrode and second electrode of the first transistor.

22. An image-sensing apparatus as claimed in claim 21,

wherein the first switch is a transistor.

23. An image-sensing apparatus as claimed in claim 22,

wherein the first switch is a transistor of an opposite polarity to the first transistor.

24. An image-sensing apparatus as claimed in claim 21,

wherein the pixels are arranged in a matrix.

25. An image-sensing apparatus as claimed in claim 21,

wherein the pixels each further include a third switch having one contact connected to the control electrode of the first transistor and another contact to

which a direct-current voltage is applied, and

wherein the controller turns off the third switch when making the individual pixels perform image sensing and turns on the third switch when detecting variations in sensitivity of the individual pixels.

26. An image-sensing apparatus as claimed in claim 25,

wherein the third switch is a transistor.

27. An image-sensing apparatus as claimed in claim 21,

wherein the pixels each further include a capacitor having one end connected to the control electrode of the first transistor, and

wherein the controller applies different voltages to another end of the capacitor between when making the individual pixels perform image sensing and when detecting variations in sensitivity of the individual pixels.

28. An image-sensing apparatus as claimed in claim 21,

wherein the second switch is a transistor.

29. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including a photoelectric conversion portion that outputs an electric signal produced in accordance with amount of incident light and converted natural-logarithmically and a lead-out path by way of which the electric signal output from the photoelectric conversion portion is fed to an output signal line, the photoelectric conversion portion comprising:

a photosensitive element having a first electrode to which a direct-current voltage is applied and a second electrode;

a first switch having one contact connected to the second electrode of the photosensitive element;

a first transistor having a first electrode and a control electrode connected to another contact of the first switch and a second electrode to which a direct-current voltage is applied;

a second transistor having a first electrode to which a direct-current voltage is applied, a second electrode from which an electric signal is output, and a control electrode connected to the first electrode and control electrode of the first transistor; and

a resetting capacitor having one end connected to the control electrode of the first transistor; and

a controller that makes the individual pixels perform image sensing by turning on the first switch and feeding a first voltage to another end of the resetting capacitor so that the first transistor operates in a subthreshold region and that resets the individual pixels by turning off the first switch and feeding a second voltage to the other end of the resetting capacitor so that a higher current flows through the first transistor than during image sensing.

30. An image-sensing apparatus as claimed in claim 29, wherein the first switch is a transistor.

31. An image-sensing apparatus as claimed in claim 30,

wherein the first switch is a transistor of an opposite polarity to the first transistor.

32. An image-sensing apparatus as claimed in claim 29,

wherein the pixels are arranged in a matrix.

33. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including a photoelectric conversion portion that outputs an electric signal produced in accordance with amount of incident light and converted natural-logarithmically and a lead-out path by way of which the electric signal output from the photoelectric conversion portion is fed to an output signal line, the photoelectric conversion portion comprising:

a photosensitive element having a first electrode to which a direct-current voltage is applied and a second electrode;

a first switch having one contact connected to the second electrode of the photosensitive element;

a first transistor having a first electrode and a control electrode connected to another contact of the first switch and a second electrode; and

a second transistor having a first electrode to which a direct-current voltage is applied, a second electrode from which an electric signal is output, and a control electrode connected to the first electrode and control electrode of the first transistor; and

a controller that makes the individual pixels perform image sensing by turning on the first switch and feeding a first voltage to the second electrode of the

first transistor so that the first transistor operates in a subthreshold region and that resets the individual pixels by turning off the first switch and feeding a second voltage to the second electrode of the first transistor so that a higher current flows through the first transistor than before feeding the second voltage thereto.

34. An image-sensing apparatus as claimed in claim 33, wherein the first switch is a transistor.

35. An image-sensing apparatus as claimed in claim 34, wherein the first switch is a transistor of an opposite polarity to the first transistor.

36. An image-sensing apparatus as claimed in claim 33, wherein the pixels are arranged in a matrix.

37. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including a photoelectric conversion portion that outputs an electric signal produced in accordance with amount of incident light and converted natural-logarithmically and a lead-out path by way of which the electric signal output from the photoelectric conversion portion is fed to an output signal line, the photoelectric conversion portion comprising:

a photosensitive element having a first electrode and a second electrode to which a direct-current voltage is applied;

a first switch having one contact connected to the first electrode of the

photosensitive element;

a first transistor having a first electrode, a second electrode connected to another contact of the first switch, and a control electrode; and

a second transistor having a first electrode to which a direct-current voltage is applied, a second electrode from which an electric signal is output, and a control electrode connected to the second electrode of the first transistor; and

a controller that makes the individual pixels perform image sensing by turning on the first switch so that the first transistor operates in a subthreshold region and that detects variations in sensitivity of the individual pixels by turning off the first switch and varying a voltage fed to the first electrode of the first transistor.

38. An image-sensing apparatus as claimed in claim 37, wherein the first switch is a transistor.

39. An image-sensing apparatus as claimed in claim 37, wherein the pixels are arranged in a matrix.

40. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including:

a photodiode having two electrodes, the photodiode producing an electric signal in accordance with amount of incident light;

a first MOS transistor having a first electrode connected to one electrode of the photodiode, a second electrode, and a gate electrode;

a second MOS transistor having a first electrode connected to the second electrode of the first MOS transistor, a second electrode, and a gate electrode;

a third MOS transistor having a first electrode, a second electrode, and a gate electrode connected to the first electrode of the second MOS transistor;

a fourth MOS transistor having a first electrode connected to the first electrode of the second MOS transistor, a second electrode connected to the gate electrode of the second MOS transistor, and a gate electrode; and

a fifth MOS transistor having a first electrode connected to the gate electrode of the second MOS transistor, a second electrode to which a direct-current voltage is applied, and a gate electrode; and

a controller that makes the individual pixels perform image sensing by turning on the first and fourth MOS transistors and turning off the fifth MOS transistor so that the second MOS transistor operates in a subthreshold region below a threshold voltage thereof and that detects variations in sensitivity of the individual pixels due to variations in the threshold voltage of the second MOS transistors by turning off the first and fourth MOS transistors and turning on the fifth MOS transistor and then varying a voltage fed to the second electrode of the second MOS transistor.

41. An image-sensing apparatus as claimed in claim 40,

wherein the pixels each further include a seventh MOS transistor having a first electrode connected to the second electrode of the third MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected

to a line select line.

42. An image-sensing apparatus as claimed in claim 40,

wherein the pixels each further include a sixth MOS transistor having a first electrode to which a direct-current voltage is applied, a second electrode, and a gate electrode connected to the second electrode of the third MOS transistor, the sixth MOS transistor amplifying a signal output from the second electrode of the third MOS transistor.

43. An image-sensing apparatus as claimed in claim 42,

wherein the pixels each further include a seventh MOS transistor having a first electrode connected to the second electrode of the sixth MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

44. An image-sensing apparatus as claimed in claim 42,

wherein the pixels each further include a second capacitor having one end connected to the second electrode of the third MOS transistor, the second capacitor being reset through the third MOS transistor when a reset voltage is fed to the first electrode of the third MOS transistor.

45. An image-sensing apparatus as claimed in claim 42,

wherein the third MOS transistor receives at the first electrode thereof a direct-current voltage, and

wherein the pixels each further include:

an eighth MOS transistor having a first electrode connected to the second electrode of the third MOS transistor, a second electrode connected to a direct-current voltage, and a gate electrode; and

a second capacitor having one end connected to the second electrode of the third MOS transistor, the second capacitor being reset through the eighth MOS transistor when a reset voltage is fed to the gate electrode of the eighth MOS transistor.

46. An image-sensing apparatus as claimed in claim 40,

wherein the first MOS transistor is a MOS transistor operating in a depletion mode.

47. An image-sensing apparatus as claimed in claim 40,

wherein the first MOS transistor is a MOS transistor of an opposite polarity to the second MOS transistor.

48. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including:

a photodiode having two electrodes, the photodiode producing an electric signal in accordance with amount of incident light;

a first MOS transistor having a first electrode connected to one electrode of the photodiode, a second electrode, and a gate electrode;

a second MOS transistor having a first electrode connected to the

second electrode of the first MOS transistor, a second electrode, and a gate electrode;

a third MOS transistor having a first electrode, a second electrode, and a gate electrode connected to the first electrode of the second MOS transistor;

a fourth MOS transistor having a first electrode connected to the first electrode of the second MOS transistor, a second electrode connected to the gate electrode of the second MOS transistor, and a gate electrode; and

a first capacitor having one end connected to the gate electrode of the second MOS transistor; and

a controller that makes the individual pixels perform image sensing by turning on the first and fourth MOS transistors and feeding a first voltage to another end of the first capacitor so that the second MOS transistor operates in a subthreshold region below a threshold voltage thereof and that detects variations in sensitivity of the individual pixels due to variations in the threshold voltage of the second MOS transistors by turning off the first and fourth MOS transistors and feeding a second voltage to the other end of the first capacitor and then varying a voltage fed to the second electrode of the second MOS transistor.

49. An image-sensing apparatus as claimed in claim 48,

wherein the pixels each further include a sixth MOS transistor having a first electrode connected to the second electrode of the third MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

50. An image-sensing apparatus as claimed in claim 48,

wherein the pixels each further include a fifth MOS transistor having a first electrode to which a direct-current voltage is applied, a second electrode, and a gate electrode connected to the second electrode of the third MOS transistor, the fifth MOS transistor amplifying a signal output from the second electrode of the third MOS transistor.

51. An image-sensing apparatus as claimed in claim 50,

wherein the pixels each further include a sixth MOS transistor having a first electrode connected to the second electrode of the fifth MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

52. An image-sensing apparatus as claimed in claim 50,

wherein the pixels each further include a second capacitor having one end connected to the second electrode of the third MOS transistor, the second capacitor being reset through the third MOS transistor when a reset voltage is fed to the first electrode of the third MOS transistor.

53. An image-sensing apparatus as claimed in claim 50,

wherein the third MOS transistor receives at the first electrode thereof a direct-current voltage, and

wherein the pixels each further include:

a seventh MOS transistor having a first electrode connected to the

second electrode of the third MOS transistor, a second electrode connected to a direct-current voltage, and a gate electrode; and

a second capacitor having one end connected to the second electrode of the third MOS transistor, the second capacitor being reset through the seventh MOS transistor when a reset voltage is fed to the gate electrode of the seventh MOS transistor.

54. An image-sensing apparatus as claimed in claim 48,

wherein the first MOS transistor is a MOS transistor operating in a depletion mode.

55. An image-sensing apparatus as claimed in claim 48,

wherein the first MOS transistor is a MOS transistor of an opposite polarity to the second MOS transistor.

56. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including:

a photodiode having two electrodes, the photodiode producing an electric signal in accordance with amount of incident light;

a first MOS transistor having a first electrode connected to one electrode of the photodiode, a second electrode, and a gate electrode;

a second MOS transistor having a first electrode and a gate electrode connected to the second electrode of the first MOS transistor, and a second electrode;

a third MOS transistor having a first electrode, a second electrode, and a gate electrode connected to the first electrode and gate electrode of the second MOS transistor; and

a first capacitor having one end connected to the first electrode and gate electrode of the second MOS transistor; and

a controller that makes the individual pixels perform image sensing by turning on the first MOS transistor and feeding a first voltage to another end of the first capacitor so that the second MOS transistor operates in a subthreshold region below a threshold voltage thereof and that resets the individual pixels by turning off the first MOS transistor and feeding a second voltage to the other end of the first capacitor so that a higher current flows through the second MOS transistor than during image sensing.

57. An image-sensing apparatus as claimed in claim 56,

wherein the pixels each further include a fifth MOS transistor having a first electrode connected to the second electrode of the third MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

58. An image-sensing apparatus as claimed in claim 56,

wherein the pixels each further include a fourth MOS transistor having a first electrode to which a direct-current voltage is applied, a second electrode, and a gate electrode connected to the second electrode of the third MOS transistor, the fourth MOS transistor amplifying a signal output from the second electrode of the

third MOS transistor.

59. An image-sensing apparatus as claimed in claim 58,

wherein the pixels each further include a fifth MOS transistor having a first electrode connected to the second electrode of the fourth MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

60. An image-sensing apparatus as claimed in claim 58,

wherein the pixels each further include a second capacitor having one end connected to the second electrode of the third MOS transistor, the second capacitor being reset through the third MOS transistor when a reset voltage is fed to the first electrode of the third MOS transistor.

61. An image-sensing apparatus as claimed in claim 58,

wherein the third MOS transistor receives at the first electrode thereof a direct-current voltage, and

wherein the pixels each further include:

a sixth MOS transistor having a first electrode connected to the second electrode of the third MOS transistor, a second electrode connected to a direct-current voltage, and a gate electrode; and

a second capacitor having one end connected to the second electrode of the third MOS transistor, the second capacitor being reset through the sixth MOS transistor when a reset voltage is fed to the gate electrode of the sixth MOS

transistor.

62. An image-sensing apparatus as claimed in claim 56,

wherein the first MOS transistor is a MOS transistor operating in a depletion mode.

63. An image-sensing apparatus as claimed in claim 56,

wherein the first MOS transistor is a MOS transistor of an opposite polarity to the second MOS transistor.

64. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including:

a photodiode having two electrodes, the photodiode producing an electric signal in accordance with amount of incident light;

a first MOS transistor having a first electrode connected to one electrode of the photodiode, a second electrode, and a gate electrode;

a second MOS transistor having a first electrode and a gate electrode connected to the second electrode of the first MOS transistor, and a second electrode; and

a third MOS transistor having a first electrode, a second electrode, and a gate electrode connected to the first electrode and gate electrode of the second MOS transistor; and

a controller that makes the individual pixels perform image sensing by turning on the first MOS transistor and feeding a first voltage to the second

electrode of the second MOS transistor so that the second MOS transistor operates in a subthreshold region below a threshold voltage thereof and that resets the individual pixels by turning off the first MOS transistor and feeding a second voltage to the second electrode of the second MOS transistor so that a higher current flows through the second MOS transistor than before feeding the second voltage thereto.

65. An image-sensing apparatus as claimed in claim 64,

wherein the pixels each further include a fifth MOS transistor having a first electrode connected to the second electrode of the third MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

66. An image-sensing apparatus as claimed in claim 64,

wherein the pixels each further include a fourth MOS transistor having a first electrode to which a direct-current voltage is applied, a second electrode, and a gate electrode connected to the second electrode of the third MOS transistor, the fourth MOS transistor amplifying a signal output from the second electrode of the third MOS transistor.

67. An image-sensing apparatus as claimed in claim 66,

wherein the pixels each further include a fifth MOS transistor having a first electrode connected to the second electrode of the fourth MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a

line select line.

68. An image-sensing apparatus as claimed in claim 66,

wherein the pixels each further include a second capacitor having one end connected to the second electrode of the third MOS transistor, the second capacitor being reset through the third MOS transistor when a reset voltage is fed to the first electrode of the third MOS transistor.

69. An image-sensing apparatus as claimed in claim 66,

wherein the third MOS transistor receives at the first electrode thereof a direct-current voltage, and

wherein the pixels each further include:

a sixth MOS transistor having a first electrode connected to the second electrode of the third MOS transistor, a second electrode connected to a direct-current voltage, and a gate electrode; and

a second capacitor having one end connected to the second electrode of the third MOS transistor, the second capacitor being reset through the sixth MOS transistor when a reset voltage is fed to the gate electrode of the sixth MOS transistor.

70. An image-sensing apparatus as claimed in claim 64,

wherein the first MOS transistor is a MOS transistor operating in a depletion mode.

71. An image-sensing apparatus as claimed in claim 64,

wherein the first MOS transistor is a MOS transistor of an opposite polarity to the second MOS transistor.

72. An image-sensing apparatus comprising:

a plurality of pixels, the pixels each including:

a photodiode having two electrodes, the photodiode producing an electric signal in accordance with amount of incident light;

a first MOS transistor having a first electrode, a second electrode connected to one electrode of the photodiode, and a gate electrode;

a second MOS transistor having a first electrode, a second electrode connected to the first electrode of the first MOS transistor, and a gate electrode; and

a third MOS transistor having a first electrode, a second electrode, and a gate electrode connected to the second electrode of the second MOS transistor; and

a controller that makes the individual pixels perform image sensing by turning on the first MOS transistor so that the second MOS transistor operates in a subthreshold region below a threshold voltage thereof and that detects variations in sensitivity of the individual pixels due to variations in the threshold voltage of the second MOS transistors by turning off the first MOS transistor and then varying a voltage fed to the first electrode of the second MOS transistor.

73. An image-sensing apparatus as claimed in claim 72,

wherein the pixels each further include a fifth MOS transistor having a first

electrode connected to the second electrode of the third MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

74. An image-sensing apparatus as claimed in claim 72,

wherein the pixels each further include a fourth MOS transistor having a first electrode connected to a direct-current voltage, a second electrode, and a gate electrode connected to the second electrode of the third MOS transistor, the fourth MOS transistor amplifying a signal output from the second electrode of the third MOS transistor.

75. An image-sensing apparatus as claimed in claim 74,

wherein the pixels each further include a fifth MOS transistor having a first electrode connected to the second electrode of the fourth MOS transistor, a second electrode connected to an output signal line, and a gate electrode connected to a line select line.

76. An image-sensing apparatus as claimed in claim 74,

wherein the pixels each further include a capacitor having one end connected to the second electrode of the third MOS transistor and having another end connected to a direct-current voltage, the capacitor being reset through the third MOS transistor when a reset voltage is fed to the first electrode of the third MOS transistor.

77. An image-sensing apparatus as claimed in claim 76,

wherein the third MOS transistor is a MOS transistor of an opposite polarity to the first and second MOS transistors.

78. An image-sensing apparatus as claimed in claim 74,

wherein the first electrode of the third MOS transistor is connected to a direct-current voltage, and

wherein the pixels each further include:

a sixth MOS transistor having a first electrode connected to the second electrode of the third MOS transistor, a second electrode connected to a direct-current voltage, and a gate electrode; and

a capacitor having one end connected to the second electrode of the third MOS transistor and having another end connected to a direct-current voltage, the capacitor being reset through the sixth MOS transistor when a reset voltage is fed to the gate electrode of the sixth MOS transistor.

79. An image-sensing apparatus as claimed in claim 78,

wherein the third and sixth MOS transistors are MOS transistors of an opposite polarity to the first and second MOS transistors.